



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-0461; Project Identifier MCAI-2021-01156-T]**

**RIN 2120-AA64**

#### **Airworthiness Directives; BAE Systems (Operations) Limited Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2008-16-06, which applies to all BAE Systems (Operations) Limited Model 4101 airplanes. AD 2008-16-06 requires the installation of additional bonding leads, inspection of existing bonding leads for defects, inspection of fuel system pipe runs in the wings to ensure appropriate clearances are maintained, and corrective actions. Since the FAA issued AD 2008-16-06, a safety analysis by BAE Systems (Operations) Limited identified insufficient bonding for the crossfeed valve in the fuel tank area. This proposed AD would continue to require the actions in AD 2008-16-06, and add a requirement to install additional bonding leads around the crossfeed valve and accomplish a resistance check. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RAPublications@baesystems.com](mailto:RAPublications@baesystems.com); Internet <https://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Todd Thompson, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228; email [todd.thompson@faa.gov](mailto:todd.thompson@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

## **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0461; Project Identifier MCAI-2021-01156-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

## **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Todd Thompson, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228; email

todd.thompson@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Discussion**

The FAA issued AD 2008-16-06, Amendment 39-15624 (73 FR 45346, August 5, 2008) (AD 2008-16-06), for all BAE Systems (Operations) Limited Model 4101 airplanes. AD 2008-16-06 requires the installation of additional bonding leads, inspection of existing bonding leads for defects, inspection of fuel system pipe runs in the wings to ensure appropriate clearances are maintained, and corrective actions. Corrective actions include replacing any defective bonding leads and adjusting clearances of the fuel system pipe runs. AD 2008-16-06 resulted from a Special Federal Aviation Regulation 88 (SFAR 88) and equivalent Joint Aviation Authorities/European Aviation Safety Agency (JAA/EASA) policy assessment of fuel tank wiring installations in which BAE Systems (Operations) Limited identified the need for design changes to the bonding in the fuel tank area of Model 4101 airplanes. The FAA issued AD 2008-16-06 to address insufficient or defective bonding in the fuel tank area, which, if not corrected, could lead to ignition of fuel vapors and subsequent fuel tank explosion.

## **Actions Since AD 2008-16-06 was Issued**

Since the FAA issued AD 2008-16-06, a safety analysis by BAE Systems (Operations) Limited identified insufficient bonding for the crossfeed valve in the fuel tank, and determined that installing additional bonding leads around the crossfeed valve and a resistance check are required.

The Civil Aviation Authority (CAA), which is the aviation authority for the United Kingdom, has issued CAA AD G-2021-0013, dated October 21, 2021 (also referred to as the MCAI), to correct an unsafe condition for all BAE Systems (Operations) Limited Model 4101 airplanes. You may examine the MCAI in the AD

docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461.

This proposed AD was prompted by a report that there is insufficient bonding of the crossfeed valve in the fuel tank area. The FAA is proposing this AD to address insufficient or defective bonding in the fuel tank area, which, if not corrected, could lead to ignition of fuel vapors and subsequent fuel tank explosion. See the MCAI for additional background information.

### **Related Service Information under 1 CFR Part 51**

BAE Systems (Operations) Limited has issued Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. This service information describes procedures for installation of additional bonding leads on components within the dry bay at Rib 1 on the airplane centerline and below the fuselage (around the crossfeed valve), a resistance check, an inspection of existing bonding leads for defects, an inspection for clearance of all fuel system pipe runs in the wings, and corrective actions, as necessary. Corrective actions include replacing any defective bonding leads and adjusting clearances of the fuel system pipe runs.

This proposed AD would also require BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008, which the Director of the Federal Register approved for incorporation by reference as of September 9, 2008 (73 FR 45346, August 5, 2008).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA's Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement

with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Proposed Requirements of this NPRM**

This proposed AD would retain all requirements of AD 2008-16-06. This proposed AD would also require accomplishing the actions specified in the service information described previously.

### **Costs of Compliance**

The FAA estimates that this proposed AD affects 12 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs for required actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Retained actions from AD 2008-16-06	80 work-hours X \$85 per hour = \$6,800	\$1,700	\$8,500	\$102,000
New proposed actions	2 work-hours X \$85 per hour = \$170	\$1,700	\$1,870	\$22,440

#### **Estimated costs of on-condition actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
1 work-hour X \$85 per hour = \$85	\$0	\$85

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2008-16-06, Amendment 39-15624 (73 FR 45346, August 5, 2008); and

b. Adding the following new AD:

**BAE Systems (Operations) Limited:** Docket No. FAA-2022-0461; Project Identifier MCAI-2021-01156-T.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2008-16-06, Amendment 39-15624 (73 FR 45346, August 5, 2008) (AD 2008-16-06).

**(c) Applicability**

This AD applies to BAE Systems (Operations) Limited Model 4101 airplanes, certificated in any category, all serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Reason**

This AD was prompted by a report that there is insufficient bonding of the crossfeed valve in the fuel tank area. The FAA is issuing this AD to address insufficient or defective bonding in the fuel tank area, which, if not corrected, could lead to ignition of fuel vapors and subsequent fuel tank explosion.



**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Actions, with Revised Service Information**

This paragraph restates the requirements of paragraph (f) of AD 2008-16-06, with revised service information. Within 24 months after September 9, 2008 (the effective date of AD 2008-16-06), unless already done, do the actions specified in paragraphs (g)(1) through (3) of this AD.

(1) Inspect the bonding leads between ribs 1 and 9, and between ribs 16 and 19, in the left-hand (LH) and right-hand (RH) wings in accordance with paragraph 2.B.(2) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019; and, before next flight, replace all defective bonding leads with airworthy parts in accordance with BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD, BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

(2) Inspect all fuel system pipe runs inside the LH and RH wings in accordance with paragraph 2.B.(3) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019; and, if incorrect clearances are found, before next flight, adjust clearances in accordance with BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD,

BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

(3) Install additional electrical bonding of components within the LH and RH wings in accordance with paragraphs 2.B.(4) through 2.B.(15) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or paragraphs 2.B.(4) and 2.B.(6) through 2.B.(16) inclusive of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD, BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

**(h) New Requirement of this AD: Replace Bolts and Washers Securing Crossfeed Valve**

Within 24 months after the effective date of this AD, install additional bonding leads on components within the dry bay at Rib 1 on the airplane centerline and below the fuselage (around the crossfeed valve) and perform a resistance check in accordance with paragraph 2.B.(5) of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019.

**(i) Other FAA AD Provisions**

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (j)(2) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight

Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or the Civil Aviation Authority (CAA); or BAE Systems (Operations) Limited's CAA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) CAA AD G-2021-0013, dated October 21, 2021, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461.

(2) For more information about this AD, contact Todd Thompson, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228; email [todd.thompson@faa.gov](mailto:todd.thompson@faa.gov).

(3) For service information identified in this AD, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RAPublications@baesystems.com](mailto:RAPublications@baesystems.com); Internet <https://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety

Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on April 14, 2022.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2022-08411 Filed: 4/19/2022 8:45 am; Publication Date: 4/20/2022]